

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-30. (Cancelled)

31. (Withdrawn) A graph display processing device for displaying data with periodicity in an output region, comprising:

cycle determination means for sequentially receiving data with periodicity to determine an object cycle based on the periodicity of the data; and

display control means for determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

32. (Withdrawn) A graph display control device for displaying data with periodicity in an output region, comprising:

display control means for determining, based on data for an object cycle based on the periodicity of the data, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

33. (Withdrawn) A computer-readable program for causing a computer to function as a graph display processing device for displaying data with periodicity in an output region, comprising the steps of:

sequentially receiving data with periodicity to determine an object cycle based on the periodicity of the data; and

determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

34. (Withdrawn) A computer-readable program for causing a computer to function as a graph display control device for displaying data with periodicity in an output region, comprising the steps of:

determining, based on data for an object cycle based on the periodicity of the data, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

35. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the display control means, or the process of correcting a display position of a graph, is characterized by:

for given data recorded in a first recording region for allowing the data to be recorded therein so as to be displayed as a graph in the output region, and a second recording region for allowing the data to be recorded therein so as to be displayed as a graph in the output region,

when it is determined that the data included in the cycle is displayed appropriately as a graph in the output region, outputting the data recorded in the first recording region to the output region; and

when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting contents recorded in the second recording region such that the data included in the cycle is displayed appropriately as a graph in the output region, and duplicating the contents recorded in the second recording region to the first recording region, and outputting the contents duplicated to the first recording region to the output region;

wherein the data includes electrocardiogram measurement data.

36. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the display control means, or the process of correcting a display position of a graph, is characterized by:

when the cycle determination means, or the process of determining an object cycle, fails to determine an object cycle, not correcting a display position of a graph of the data in the output region.

37. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the cycle determination means, or the process of determining an object cycle, is characterized by:

determining an object cycle based on a characteristic of the data, and

the display control means, or the process of correcting a display position of a graph, is characterized by:

when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing the display position of the graph in the output region in a direction of variation components of the data with periodicity such that the data included in the cycle is displayed appropriately as a graph in the output region.

38. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the characteristic includes central portion data relating to a central portion in a cycle, and

the display control means, or the means for correcting a display position of a graph, is characterized by:

determining, based on the central portion data, whether or not the central portion in the cycle is positioned in a central region in the output region, to determine whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing the display position of the graph in the output region in a direction of variation components of the data with periodicity such that the central portion in the cycle is positioned in the central region.

39. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 37, wherein
the characteristic is calculated based on a local maximum or a local minimum in the object cycle.

40. (Withdrawn) The graph display processing device or the program according to Claim 37, wherein

the data includes electrocardiogram measurement data, and
the characteristic is calculated based on any of a P-wave height (P potential), a Q-wave height (Q potential), an R-wave height (R potential), an S-wave height (S potential), or a T-wave height (T potential) of an electrocardiographic waveform.

41. (Withdrawn) The graph display processing device or the program according to Claim 40, wherein

the data relating to the central portion in the cycle includes data relating to a position dividing a segment between the R-wave height and the S-wave height at a ratio of 1:2.

42. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the cycle determination means, or the process of determining an object cycle, is characterized by:

determining an object cycle based on a characteristic of the data, and

the display control means, or the process of correcting a display position of a graph, is characterized by:

when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing a display magnification in a direction of the variation components in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region.

43. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 42, wherein

the characteristic includes amplitude data relating to an amplitude in a cycle, and
the display control means, or the process of correcting a display position of a graph, is characterized by:

determining, based on the amplitude data, whether or not a magnitude of the amplitude in the cycle fits a predetermined amplitude criterion, and when it is determined that the magnitude of the amplitude does not match the amplitude criterion, changing a display magnification in the direction of the variation components in the output region.

44. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 42, wherein

the characteristic is calculated based on a local maximum or a local minimum in the object cycle.

45. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 42, wherein

the data includes electrocardiogram measurement data, and

the characteristic is calculated based on any of a P-wave height (P potential), a Q-wave height (Q potential), an R-wave height (R potential), an S-wave height (S potential), or a T-wave height (T potential) of an electrocardiographic waveform.

46. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 42, wherein

the display control means, or the process of correcting a display position of a graph, is characterized by:

determining whether or not the magnitude of the amplitude based on a value relating to an average of the amplitude data in a plurality of the cycles fits the predetermined amplitude criterion.

47. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 42, wherein

the display control means, or the process of correcting a display position of a graph, is characterized by:

when the amplitude data exceeds an upper amplitude criterion, changing the display magnification to double, or when the amplitude data falls short of a lower amplitude criterion, changing the display magnification to half.

48. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 37, wherein

the display control means, or the process of correcting a display position of a graph, is further characterized by:

when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing a display magnification in a direction of the variation components in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region.

49. (Withdrawn) The graph display processing device or the graph display control device according to Claim 31, further comprising:

a recording region for allowing the data to be recorded therein so as to be displayed as a graph in the output region, wherein

the recording region allows the data to be recorded therein so as to be dividable at least for each object cycle determined by the cycle determination means.

50. (Withdrawn) The graph display processing device or the graph display control device, or the program, according to Claim 31, wherein

the display control means, or the process of correcting a display position of a graph, is further characterized by:

based on the determination of the object cycle, presenting in the output region a recognition mark which allows recognition of the object cycle of the graph, in correlation with the cycle.

51. (Withdrawn) A graph display processing device for displaying data with periodicity in an output region, wherein

a CPU of the graph display processing device is characterized by:
sequentially receiving data with periodicity to determine an object cycle based on the periodicity of the data; and

determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

52. (Withdrawn) A graph display control device for displaying data with periodicity in an output region, wherein

a CPU of the graph display control device is characterized by:

determining, based on data for an object cycle based on the periodicity of the data, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

53. (Withdrawn) A graphical representation that represents a graph based on data with periodicity, wherein

the graphical representation represents a graph based on the data in an output region, and a position of the graph as a display object in the output region is corrected for each cycle of the data such that a central portion of the graph in the cycle is positioned in a central region in the output region;

wherein the data includes electrocardiogram measurement data.

54. (Withdrawn) A graph display method for displaying data with periodicity in an output region, comprising the steps of:

sequentially receiving data with periodicity to determine an object cycle based on the periodicity of the data; and

determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting a display position of a graph of the data in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

55. (Withdrawn) A graph display method for displaying data with periodicity in an output region, comprising the steps of:

sequentially receiving data with periodicity to determine an object cycle of the data based on a characteristic of the data; and

determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing a display position of the graph in the output region in a direction of variation components of the data with periodicity such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

56. (Withdrawn) A graph display method for displaying data with periodicity in an output region, comprising the steps of:

sequentially receiving data with periodicity to determine an object cycle of the data based on a characteristic of the data; and

determining, based on data for the object cycle, whether or not data included in the cycle is displayed appropriately as a graph in the output region, and when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, changing a display magnification in a direction of the variation components in the output region such that the data included in the cycle is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

57. (Withdrawn) A graph display method for outputting data with periodicity to an output region, comprising the steps of:

for given data recorded in a first recording region for allowing the data to be recorded therein so as to be displayed as a graph in the output region, and data recorded in a second recording region for allowing the data to be recorded therein so as to be displayed as a graph in the output region,

when it is determined that the data included in the cycle is displayed appropriately as a graph in the output region, outputting the data recorded in the first recording region to the output region; and

when it is determined that the data included in the cycle is not displayed appropriately as a graph in the output region, correcting contents recorded in the second recording region such that the data included in the cycle is displayed appropriately as a graph in the output region, and duplicating the contents recorded in the second recording region to the first recording region, and outputting the contents duplicated to the first recording region to the output region;

wherein the data includes electrocardiogram measurement data.

58. (Withdrawn) A graph display method for displaying data in an output region, comprising the steps of:

sequentially receiving data, determining whether or not data for a predetermined interval is displayed appropriately as a graph in the output region, and when it is determined that the data is not displayed appropriately as a graph in the output region, correcting the output region such that the data is displayed appropriately as a graph in the output region;

wherein the data includes electrocardiogram measurement data.

59. (Currently Amended) An electrocardiogram display method for displaying an electrocardiogram in an output region based on electrocardiogram measurement data, comprising the steps of:

receiving electrocardiogram measurement data including noise which affects a display position of an electrocardiogram;

displaying an electrocardiogram in the output region based on the electrocardiogram measurement data;

determining a cardiac cycle of the electrocardiogram as a display object;

determining, based on data on the cardiac cycle, whether or not an electrocardiogram included in the cardiac cycle is displayed appropriately in the output region;

when it is determined that the electrocardiogram included in the cardiac cycle is not displayed appropriately in the output region due to a presence of the noise, scrolling the electrocardiogram for the cardiac cycle in the output region in a direction of cardiac electric potential variation components in order that the cardiac cycle to be displayed in the output region; and

wherein in said scrolling, the electrocardiogram is shifted in a direction of cardiac electric potential variation components without causing a deformation of waveform.

60. (Currently Amended) An electrocardiogram display method for displaying an electrocardiogram while performing a display position correction process in order that a cardiac cycle of an electrocardiogram based on electrocardiogram measurement data to be displayed in an output region, comprising the steps of:

receiving electrocardiogram measurement data;

determining a cardiac cycle of an electrocardiogram based on the electrocardiogram measurement data;

performing a display position correction process such that an electrocardiogram included in the cardiac cycle is displayed appropriately in the output region, in correlation, in terms of timing, with the process of determining a cardiac cycle; and

wherein when the electrocardiogram included in the cardiac cycle is not displayed appropriately, in said scrolling, the electrocardiogram is shifted in a direction of cardiac electric potential variation components without causing a deformation of waveform.